UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,246	07/31/2000	OSAMU WADA	106389	9837

25944 7590 01/12/2005

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
OSORIO, RICARDO	
ART UNIT	**PAPER NUMBER**
2673	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/601,246	WADA ET AL.	
	Examiner	Art Unit	
	RICARDO L OSORIO	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-11 and 13-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 5-11 and 13-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 3, 5-11 and 13-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claims 1, 11 and 14, in line 7, applicant added the limitation "in still images". There is no support in the specification for this limitation.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-11 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by McKnight (5,959,598).

Under claims 1, 3, 11, and 13-18, McKnight teaches of a color display device, or projector (col. 1, lines 27-43, it is inherent that a projection device needs a lens to project the image) comprising

a color light generation unit that repetitively generates a plurality of colored lights in a time sequence with a predetermined frequency controlled by the number of the color filter rotations (col. 12, lines 22-30 and col. 18, lines 12-22); said frequency being equal to or greater than 250 Hz (col. 18, lines 12-65), said colored light generation unit comprising a light source (col. 12, lines 21-24), and a color filter that generates said plurality of colored lights from light coming from said light source (col. 18, lines 19-20); and an image generation unit that processes said plurality of colored lights so as to generate an image corresponding to each of said plurality of colored lights generated in a time sequence (Fig. 6A and col. 18, lines 22-30), said predetermined frequency being at least 180 HZ and reaching 300 HZ or higher display rates so as to reduce or eliminate color breakup caused by high speed eye movement (col. 18, lines 12-65. Note that the term high speed eye movement is overly broad).

Under claim 5, McKnight teaches of said color light generation unit comprising of light sources that emit colored lights different from each other and that turn on in a time sequence (col. 12, lines 22-51).

Under claim 6, McKnight teaches of said image generation unit being a reflection type spatial light modulator (col. 14, line 64-col. 15, line 6).

Under claim 7, McKnight teaches of said spatial light modulator being a liquid crystal device (col. 1, line 40).

Under claim 8, McKnight teaches of said image generation unit being a digital micro-mirror device (col. 1, line 37).

Under claim 9, McKnight teaches of said image generation unit being a transmission type spatial light modulator (col. 14, line 64-col. 15, line 6).

Under claim 10, McKnight teaches of a projection display system (col. 1, line 34). Although, McKnight does not precisely mention of a lens for projecting the image, it is inherent for a projection display to have a lens that is necessary to project the image into the image projection panel.

Response to Arguments

5. Applicant's arguments filed 12/10/2004 have been fully considered but they are not persuasive.

Response to arguments under 35 U.S.C. 112, First Paragraph:

First, applicant argues that "display devices inherently project, as is well known at least one of a still image and a moving image".

Examiner disagrees because display devices are capable of projecting at least one of a still image and a moving image, however, both still images and moving images are not necessarily displayed at the same time and/or all the time in a displayed image on a screen.

Next, applicant argues the following: "page 4, lines 20-23 discusses the actions of a presenter who performs a presentation standing in front of a screen. Clearly, presentations displayed on a screen can be presentations of still images such as graphical displays and/or textual displays".

Examiner disagrees because presentations by a presenter standing in front of a screen, cannot only be presentations of still images such as graphical displays and/or textual displays, but also can be presentations of moving images, animations, videos, etc.

Finally, applicant argues that "the specification discussed on page 7, lines 1-5 a person who watches a displayed image on a screen".

Examiner disagrees because, a displayed image on a screen can be a moving image, animation, video, etc.

Therefore, examiner maintains that there is no support in the specification for in still images (emphasis added).

Response to arguments under 35 U.S.C. 102(b):

First, applicant admits that McKnight discloses increasing the subframe rate to solve color breakup in moving images, and further admits that McKnight discloses 6 analog subframes, 9, 12, etc... (the color repetition frequency, 120 Hz, 180 Hz, 240 Hz, etc...).

Next, applicant argues that McKnight does not disclose "reducing or eliminating color breakup in still images by high speed eye movement, and that McKnight can not have the necessity of increasing the subframe rate in still image.

Examiner disagrees because, as discussed above (see 112 First Paragraph arguments), there is no support in the specification for reducing or eliminating color breakup "in still images".

Next, applicant argues, that McKnight does not teach, disclose or even suggest the problem of color breakup by a high speed eye movement (saccade eye movement).

Examiner disagrees because the claimed term "high speed eye movement" is overly broad, for example, just as a viewer can move eyes fast to follow a presenter causing color breakup, also, a user can move eyes fast to follow moving objects, which also causes color breakup.

Finally, applicant argues that McKnight only discloses the color repetition frequency is higher than ordinary display rate (frame frequency of 60 Hz). In other words, McKnight merely teaches or suggests the threshold value of the color repetition frequency is 60 Hz to solve color breakup

by the moving images. Accordingly McKnight does not disclose the threshold value of the color repetition frequency is 250 Hz.

Examiner disagrees because McKnight teaches of displaying three subframes R, G and B within the duration of a single image which occurs at a rate of 180 HZ (3 times 60 HZ). When interspersing more subframes into the time allotted for the single color image, for example, six, nine or even twelve subframes, the rate increases to a much higher rate (above ordinary display rates), which is clearly higher than 300 HZ, for example, six times, nine times, or twelve times 60 HZ). The criticality of increasing the rate is that of reduction of color breakup effects (see col. 18, lines 12-65). Therefore, McKnight clearly teaches the color repetition frequency being equal to or greater than the value of 250 Hz.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is 703 305-2248. The examiner can normally be reached on Monday through Thursday from 7:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 703 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

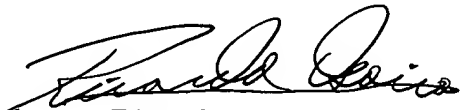
Washington, D.C. 20231

or faxed to:

703 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ricardo L. Osorio
Examiner
Art Unit: 2673

RLO
January 7, 2005